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protection versus unemployment insurance

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# Provisions of the welfare state: employment protection versus unemployment insurance

Michael Neugart<sup>\*†</sup>

## Abstract

Employment protection and unemployment benefits are considered as the most prominent insurance devices for workers to protect themselves against the risk of unemployment. It occurs that societies either choose a high level of employment protection relative to unemployment benefits or vice versa. This paper explains where countries locate on this trade-off. It is argued that higher coverage of voters out-of-the labor force with intra household transfers yields a politico-economic equilibrium with relatively high employment protection and relatively low unemployment benefits. Cross country data is presented that corroborates the outcomes of the model. While positive in nature the findings bear high relevance for policymakers. They suggest that ‘flexicurity’ policies might fail if their implementation does not adequately address the causes of countries’ current institutional settings - here family ties that express themselves in preferences over certain welfare state arrangements.

*Keywords:* employment protection, unemployment benefits, trade-off, ‘flexicurity’, probabilistic voting model

*JEL-Classification:* D72, D78, H55

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# 1 Introduction

A key characteristic of modern welfare states is the protection against the risk of unemployment. Two devices are essential: unemployment benefits (UB) and employment protection legislation (EPL). Cross country evidence suggests that there is a trade-off between those two insurance devices. Countries either have a relatively stringent EPL and relatively low unemployment benefit levels, or vice versa. This has, for example, been documented by Buti et al. (1998) and Boeri et al. (2004).

In this paper I argue that where countries locate on this trade-off is driven by the share of voters who are covered by within family transfers. In particular, it is claimed that voters who are not attached to the labor market but live in households that provide income transfers have a relatively stronger preference for EPL versus unemployment benefits. The reason is that the former institution makes the job of the household member that provides the transfers more secure, while unemployment benefits are financed via taxes that reduce the net income of the household. Parties competing for office make policy proposals taking appropriately into account the preferences of the different electoral groups. Thus, a larger group of voters out-of-the labor force covered by household transfers increases the weight that parties attach to their policy preferences. Consequently, a relatively more stringent EPL will be the outcome of the electoral race.

Besides the positive analysis of the trade-off that the paper aims at, the issue carries policy relevance. It is often argued that in a rapidly changing world unemployment benefits is the superior insurance device to EPL as it does not impede labor reallocation (Bertola and Boeri (2002)). Providing insurance while minimizing detrimental effects on the efficient allocation of resources is much in the spirit of what has been coined the ‘flexicurity’ approach to labor market institutions (see e.g. Wilthagen (1998) and Commission (2003)). If, however, the combination of insurance modes are stable politico-economic equilibria, reflecting preferences of voters as I argue, then

institutional engineering is doomed to fail. While it might be desirable to move along the trade-off based on some welfare criterium, it is not necessarily the case that more unemployment benefits in exchange for less EPL or vice versa is a winning policy. Then, no such offer will be made to the electorate by competing parties that seek office.

There is a still small but growing literature on the political economy of labor market institutions that, so far, has analyzed EPL and unemployment benefits separately. The political economy of unemployment insurance systems has been studied by Wright (1986), Saint-Paul (1996), DiTella and MacCulloch (2002), Hassler et al. (2005), Neugart (2005) or Goerke et al. (2006) among others. Politico economic analysis of EPL can be found in Saint-Paul (2002) or Algan and Cahuc (2004).

As far as I can tell Boeri et al. (2004) and Algan and Cahuc (2006) have made the only attempts to study the choice of the two modes of insurance jointly up to now. The former propose two mechanisms explaining the trade-off, one that recurs to the age composition of the electorate, and the other to the skill composition. They show that a higher discount rate lets unskilled insiders choose more EPL in exchange for lower unemployment benefits, which implies that societies with a more aged electorate will want less unemployment benefits but more EPL. Secondly, it is argued that cross country variation arises as the decisive voter may either be an unskilled insider with a relatively high desire for EPL or an unskilled outsider with a relatively high preference for unemployment benefits. The latter see the choice of those insurance devices rooted in the civic attitudes of voters. There, it is argued that countries where civic attitudes imply cheating towards the government provided transfers are less apt to implement such, then costly, schemes.

This paper adds an alternative but not necessarily competing explanation. I argue that voters out-of-the labor force living in a household that receives labor market income have a vital interest in the protection of the employed household member who provides intra family transfers. Thus, countries in

which the family is a major means of income source for voters not attached to the labor market will find themselves with relatively high levels of EPL. Unemployment benefits in those countries are relatively lower as benefits have to be financed by taxes on labor income that reduce the employed voters' and consequently the families' net income.

There is a considerable body of evidence on family transfers (see the e.g. Laitner (1997)) and also on labor supply decisions in the wake of those transfers (see e.g. McElroy (1985) or Rosenzweig and Wolpin (1993)). Not much is known, however, on how family transfers possibly affect the voting behavior of individuals and thus the choice of institutions. It has been argued that children who choose to live with their parents in order to circumvent credit constraints by family transfers have a vested interest in their parent's jobs being protected (see Fogli (2000)). Brugiavini et al. (2003) show that young individuals whose parents are retirees vote for a generous social security system due to the intra-family transfers that they receive. To the best of my knowledge, this paper is so far the only additional attempt to link family transfers to a positive analysis of labor market institutions.

The following section lays out the labor market model and the political decision mechanism, and presents the key results of the politico-economic model. Section 4 provides evidence that supports the main propositions. The last section concludes.

## 2 The model

### 2.1 The labor market

Initially voters are exogenously allocated to different labor market states, see also Figure 1. They can either be employed ( $E$ ), unemployed ( $U$ ), or out-of-the labor force. A share  $\epsilon$  of voters out-of-the labor force lives in a household with an employed voter. This group is denoted with  $O^F$ . The

rest  $(1 - \epsilon)$  is assumed to be single.<sup>1</sup> Initially no institutions are in place, so that unemployed workers have zero income. At the beginning of period  $t = 1$  the electorate votes on two labor market institutions: the flexibility of the EPL ( $0 \leq f \leq 1$ ) and the generosity of the UB which are payed as a fraction (replacement rate)  $0 \leq \delta \leq 1$  of the former wage for one period. At the end of period  $t = 1$  a firm might be hit by a shock. Workers are laid off and unemployed workers may find a job depending on the flexibility  $f$  of the employment protection legislation (EPL). Formally, a job goes sour at rate  $s(f)$  with  $s_f > 0$ . Furthermore, job protection legislation shall reduce the number of vacancies posted so that the outflow rate from unemployment to employment  $a(f)$  declines in less flexible economies,  $a_f > 0$ .<sup>2</sup>

Employed voters receive a fixed wage ( $w = 1$ ), unemployed voters may receive UB, and voters out-of-the labor force receive no income, unless they live in a household with an employed voter. In this case they derive utility from an intra-household public good that is provided by the bread-winner. Quite commonly I model the transfer that a person out-of-the labor force receives from an employed person with whom he shares the household as a public good (see Bergstrom (1997)). Here, the idea is that the employed household member derives utility from two goods, a private one ( $c$ ) to which he exclusively has access to, and a public good ( $y$ ) from which every household member enjoys utility.<sup>3</sup> The amount of the public good, and thus within

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<sup>1</sup>Not allocating any voters who are out-of-the labor force to an unemployed simplifies the set-up. It does no harm to the main idea outlaid here. Namely, that those voters out-of-the labor force receiving intra-household transfers twist policies in favor of the employed voters' interests. There is no change of the main driving mechanism to be expected because typically employment rates are a lot larger than unemployment rates which is what is approximated by initially allocating voters out-of-the labor force to employed households only.

<sup>2</sup>Note, that for simplicity I postulate that the replacement rate does not have an influence on the outflow rate from unemployment ( $a_\delta = 0$ ), even though one might argue that search intensities of unemployed workers are a function of the insurance level. However, empirical evidence suggests that it is rather the duration of unemployment benefit payments than the replacement rate that matters for the transition probability to employment, see e.g. Freeman (1998).

<sup>3</sup>Examples for the public good are shared living space, television or shared automobile

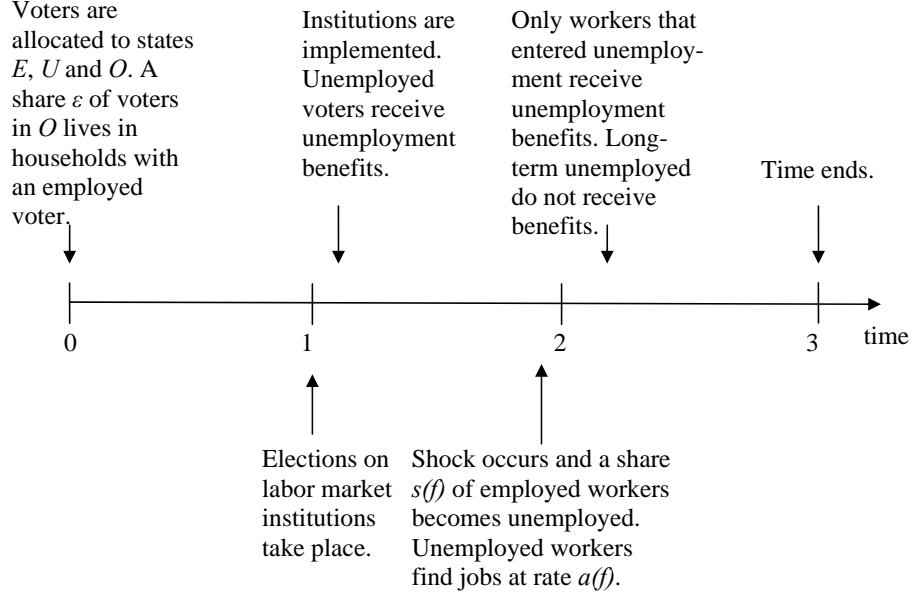


Figure 1: Sequence of events

household transfers is a choice of the employed household member. He allocates income  $(1 - \tau_t)$  between those two goods (both having a price of one by assumption) to maximize his utility

$$U(c, y) = c^\gamma + y^\gamma, \quad (1)$$

with  $0 < \gamma < 1$ , given his budget and given the policies  $\delta$  and  $f$ .

In each period the government runs a balanced budget. Out of his wage income a worker has to pay a tax  $\tau_t$  which finances the unemployment benefits. Thus, the budget constraint for the first period writes

$$\tau_1 e_1 = \delta u_1, \quad (2)$$

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trips.



where  $e$  is employment,  $u$  unemployment and the subscript denotes  $t = 1$ . For the second period balancing the budget requires

$$e_2\tau_2 = s(f)e_1\delta, \quad (3)$$

where the first term on the left hand side is employment in period 2 which is multiplied with the wage ( $w = 1$ ) and the tax in period 2.<sup>4</sup> As unemployment benefits duration is limited to one period, all those workers who were unemployed in the first period and did not find a job in the second period do not receive unemployment benefit payments anymore. Thus, what has to be financed by the unemployment benefit system is the benefit payments to the workers who just lost their jobs. The number of inflows into unemployment equals the inflow rate times employment in period 1. Solving equation (3) for the tax in period 2 yields

$$\tau_2 = M\delta$$

with

$$M = s(f)\frac{e_1}{e_2}.$$

I will proceed deriving the value functions for each state before introducing the political decision mechanism. At the time of voting each individual assesses the consequences of the EPL and UB for its current and future well being. Neglecting for simplicity discounting, the value equation for the four

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<sup>4</sup>Employment in period 2 is given by  $e_2 = (1 - s(f))e_1 + a(f)u_1$  taking into account that  $s(f)e_1$  workers loose their jobs and  $a(f)u_1$  unemployed find jobs. Clearly, the effect of a change of EPL on the employment rate is ambiguous which occurs to be backed by empirical findings (OECD (2004)).

types of agents (omitting an index  $i$  for individuals) write for the first period

$$V_1^E = 2\left(\frac{1}{2}(1 - \tau_1)\right)^\gamma + sV_2^U + (1 - s)V_2^E \quad (4)$$

$$V_1^U = 2\left(\frac{1}{2}\delta\right)^\gamma + aV_2^E + (1 - a)V_2^{UL} \quad (5)$$

$$V_1^{OF} = \left(\frac{1}{2}(1 - \tau_1)\right)^\gamma + V_2^{OF} \quad (6)$$

$$V_1^{OS} = 0 + V_2^{OS}. \quad (7)$$

The employed voter allocates his income in equal shares to the private good and the public good. At the end of the period after the shock hit, the employed voter may loose his job with  $s(f)$  which yields utility  $V_2^U$  in the second period or stay employed yielding utility  $V_2^E$ . The unemployed voter also allocates his income which is the unemployment benefits between the private and the public good. At the end of period 1 the unemployed voter finds a job at rate  $a(f)$  in which case he will enjoy  $V_2^E$  in the second period, or stay unemployed which will yield him utility  $V_2^{UL}$  of a long-term unemployed. If a person who is not attached to the labor market lives in a household with an employed voter he has access to the intra-household public good. As by assumption those voters shall not enter employment or become eligible for unemployment benefits, their second period utility will be  $V_2^{OF}$  for certain. Those voters out-of-the labor force who do not live within households have zero income.

The second period utilities for each type of voter are given by

$$V_2^E = 2\left(\frac{1}{2}(1 - \tau_2)\right)^\gamma \quad (8)$$

$$V_2^U = 2\left(\frac{1}{2}\delta\right)^\gamma \quad (9)$$

$$V_2^{U_L} = 0 \quad (10)$$

$$V_2^{O_F} = s\left(\frac{1}{2}\delta\right)^\gamma + (1 - s)\left(\frac{1}{2}(1 - \tau_2)\right)^\gamma \quad (11)$$

$$V_2^{O_S} = 0 \quad (12)$$

In period 2 the employed pay taxes  $\tau_2$  so that their net income accrues to  $(1 - \tau_2)$  which again is equally allocated to the private and public good. Benefits to the (short-term) unemployed are  $\delta$ . The long-term unemployed shall have zero income. The second period income from intra-household public goods for the voter who is out-of-the labor force and lives in a household depends on the status of the household member that was employed in period one but might have lost his job at the end of period 1. Also in period 2 voters out-of-the labor force not living in households receive zero income. Thus, utilities for the different types of voters in period 1 over the two institutions  $f$  and  $\delta$  follow as

$$\begin{aligned} V_1^E &= 2\left(\frac{1}{2}(1 - \tau_1)\right)^\gamma + s2\left(\frac{1}{2}\delta\right)^\gamma + (1 - s)2\left(\frac{1}{2}(1 - \tau_2)\right)^\gamma \\ V_1^U &= 2\left(\frac{1}{2}\delta\right)^\gamma + a2\left(\frac{1}{2}(1 - \tau_2)\right)^\gamma \\ V_1^{O_F} &= \frac{1}{2}V_1^E \\ V_1^{O_S} &= 0. \end{aligned}$$

I turn to the political decision mechanism now.

## 2.2 The political sphere

I employ a probabilistic voting model (Lindbeck and Weibull (1987)). Two office seeking parties  $P = A, B$  shall simultaneously make proposals for the two policy variables EPL ( $f_P$ ) and the replacement rate ( $\delta_P$ ). The groups of voters shall have identical ideologies  $\rho$  for the competing parties, uniformly distributed with density  $\phi$  and zero means. In addition there is an overall ideological disposition denoted with  $\eta$  which is also distributed uniformly and of mean zero, however with density  $\psi$ . A voter  $i$  of type  $J$ , with  $J = E, U, O_F, O_S$  will vote for party  $A$  if his utility fulfills

$$V^{iJ}(q_A) \geq V^{iJ}(q_B) + \rho^{iJ} + \eta, \quad (13)$$

with  $q_P$  being the vector over the two policies  $f_P$  and  $\delta_P$ . The timing is such that the two parties simultaneously make the policy proposals  $q_A$  and  $q_B$  at the end of period zero. Then the uncertainty with respect to the ideological dispositions of the voters is resolved. Elections are held and the winning party implements its announced policy at the beginning of period 1.

Parties maximize their expected winning probability  $p_P = P(\pi_P > 1/2)$ , where  $\pi_P$  are the votes that party  $P$  receives taking as given the policy of the competing party. The upshot of the probabilistic voting model is that the parties maximize a weighted welfare function in order to derive a policy proposal that gets them into office (see also Persson and Tabellini (2000)). In short, they maximize a function  $W$ :

$$W = e_1 V_1^E(q_P) + u_1 V_1^U(q_P) + \epsilon o V_1^{O_F} + (1 - \epsilon) o V_1^{O_S} \quad (14)$$

with respect to the policies  $q_P(\delta, f)$ .

### 3 Results

Note, that the weights in equation (14) are independent from the choice of the labor market insurance devices due to the assumption that individuals are allocated exogenously to the different labor states in period 1 when the vote takes place. The unemployment benefits and EPL are determined by the first order conditions

$$\begin{aligned} e_1 \frac{\partial V_1^E}{\partial \delta} + u_1 \frac{\partial V_1^U}{\partial \delta} + \frac{1}{2} \epsilon o \frac{\partial V_1^E}{\partial \delta} &= 0 \\ e_1 \frac{\partial V_1^E}{\partial f} + u_1 \frac{\partial V_1^U}{\partial f} + \frac{1}{2} \epsilon o \frac{\partial V_1^E}{\partial f} &= 0, \end{aligned}$$

using  $V_1^E = 2V_1^{O_F}$ . As the utility of voters out-of-the labor force and not living in a family is not affected by the choice of insurance, only the marginal costs and benefits of the employed, unemployed and those out-of-the labor force living in a household determine the winning labor market policy.

Inserting utilities and taking partial derivatives yields after rearranging the first order condition on the replacement rate as

$$\begin{aligned} (e_1 + \frac{1}{2} \epsilon o) & \left( -\frac{u_1}{e_1} \frac{1}{(\frac{1}{2}(1 - \delta \frac{u_1}{e_1}))^{1-\gamma}} + s \frac{1}{(\frac{1}{2} \delta)^{1-\gamma}} - (1-s)M \frac{1}{(\frac{1}{2}(1 - \delta M))^{1-\gamma}} \right) \\ & + u_1 \left( \frac{1}{(\frac{1}{2} \delta)^{1-\gamma}} - aM \frac{1}{(\frac{1}{2}(1 - \delta M))^{1-\gamma}} \right) = 0. \end{aligned} \tag{15}$$

The first order condition consists of two terms. One which is weighted with the share of the employed in period 1 and those living in a household with them. The other carries the unemployment rate in period 1 as a weight. An increase in the replacement rate decreases the utility of the former group as a voter in this group has to finance it in period one and should he stay employed also in period 2. In case he becomes unemployed he will profit from an increase in the replacement rate. An unemployed voter yields a marginal

gain from an increase in the replacement rate in period 1 but should he find a job in period 2, he would have to carry the additional tax burden that comes with an increase in the replacement rate. Empirically the average duration of a job is larger than the average duration of an unemployment spell ( $s \ll a$ ) so that an employed person and those living with them in a household will demand less unemployment insurance than an unemployed person. Thus, increasing the share of voters out-of-the labor force living in a household ( $\epsilon$ ) will yield a policy proposal by the competing parties with lower unemployment benefits given EPL.

Inserting the utility functions and taking partial derivatives yields the first order condition on EPL for the political parties as

$$\begin{aligned} & (e_1 + \frac{1}{2}\epsilon o)(-s_f(2(\frac{1}{2}(1 - M\delta))^\gamma - 2(\frac{1}{2}\delta)^\gamma) - (1 - s)K\delta\frac{\gamma}{(\frac{1}{2}(1 - M\delta))^{1-\gamma}}) \\ & + u_1(2a_f(\frac{1}{2}(1 - M\delta))^\gamma - aK\delta\frac{\gamma}{(\frac{1}{2}(1 - M\delta))^{1-\gamma}}) = 0, \end{aligned} \tag{16}$$

with  $K = dM/df$ . A more rigid economy has a positive effect on the utility of the employed and those out-of-the labor force living with them. They oppose a more flexible economy as it would raise the likelihood of a job loss that would be accompanied by an income loss, given that income from work is higher than unemployment benefits. Suppose  $K \geq 0$  which is fulfilled as long as the elasticity of employment in the second period with respect to the inflow rate is smaller or equal to one ( $1 \geq (de_2/ds)(s/e_2)$ ).<sup>5</sup> Then those individuals would also suffer from a more flexible economy because the higher costs of the unemployment benefit system would have to be covered by a higher tax rate should they stay employed. If  $K \leq 0$ , the case where more flexibility reduces the tax burden in period 2, the tax effect would have the opposite sign. Turning to the marginal effects for the unemployed, one

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<sup>5</sup>As  $K = dM/df$  and  $M = s(e_1/e_2)$  the condition follows from rearranging  $dM/df = (ds/df)(e_1/e_2) + s(-e_1(de_2/df))/e_2^2 \geq 0$ .

sees that a more flexible economy raises the utility of the unemployed as it increases the transition rate to employment. There is also a tax effect for the unemployed voter that he weighs with the likelihood of finding a job in period 2. Should the tax burden be reduced by a more flexible economy the marginal effect on the utility would be positive and vice versa.

A conflict of interest between the two groups arises in such a way that the employed and those living with them in a household would always choose a more rigid EPL than an unemployed voter if  $K$  is sufficiently small in absolute terms. The intuition is the following: Assume  $K$  was positive then a more flexible economy increases the tax burden in the second period. This would generate the effect that an employed voter would rather have a more rigid economy. The unemployed voter will prefer to have a more flexible economy as long as the tax effect is sufficiently small. If the tax effect was not sufficiently small there would be no point for him in making the economy more flexible in order to raise the likelihood of a transition to employment because income would be taxed away in the second period. If  $K$  is negative, then the unemployed voter will want a fully flexible economy. The employed voter and his household member not being in the labor force will choose rigidity if  $K$  is sufficiently small in absolute terms. If it was not, a more flexible economy would reduce the tax burden in the second period so heavily that even an employed voter would want a more flexible economy. Thus, for  $K$  being sufficiently small in absolute terms the optimal choice of the political parties will be such that more EPL will arise as the ratio of voters out-of-the labor force receiving transfers ( $\epsilon$ ) increases, given any level of unemployment benefits.

The slopes of the first order conditions on unemployment benefits and EPL are ambiguous. However, that the comparative statics of the model yield higher EPL levels relative to unemployment benefits as the share of voters out-of-the labor force living in households increases can be supported

by numerical examples.<sup>6</sup> For that exercise the inflow and outflow rates have been specified as  $s = c + bf^\beta$  and  $a = d + hf^\alpha$  with  $c, b, \beta, d, h, \alpha > 0$ . Figure 2 shows the first order conditions for  $\epsilon = 0$  (solid line – no coverage of those out-of-the labor force with household transfers) and  $\epsilon = 1$  (dashed line). As the share of voters out-of-the labor force living in a household with an employed increases, unemployment benefits decrease and EPL becomes more stringent.

Note, that the parameters which were chosen for the inflow and outflow rates yield reasonable values for the endogenous variables. Take the case where there is full coverage of voters out-of-the labor force by household transfer ( $\epsilon = 1$ ). With a quarterly calibration and  $a \approx 0.5$  average duration of unemployment is about half a year and the average duration of a job is approximately five years ( $s \approx 0.05$ ). The unemployment rate defined as unemployed divided by the sum of unemployed and employed in the second period of production is  $u_2 \approx 0.09$ . Remember that the share of voters out-of-the labor force in the numerical example is  $o = 0.3$ . Thus the employment rate defined as the employed divided by the whole population becomes approximately 0.7. Note also, that the main result of the baseline numerical example in figure 2 is robust against changes in the parameters for the inflow and outflow rates as well as the parameter of the preference function. Changes of the parameters values of  $\pm 20\%$  with respect to the baseline example still yield a trade-off between the insurance devices driven by family transfers.

## 4 Evidence

Figure 3 plots a measure of the trade-off of the two insurance devices against an indicator that captures the role of households as a means of an income

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<sup>6</sup>For the numerical example that follows I verified the second order conditions for a maximum. A formal proof of the main proposition, namely that variation in within household transfers yield the trade-off can be found in Neugart (2007).



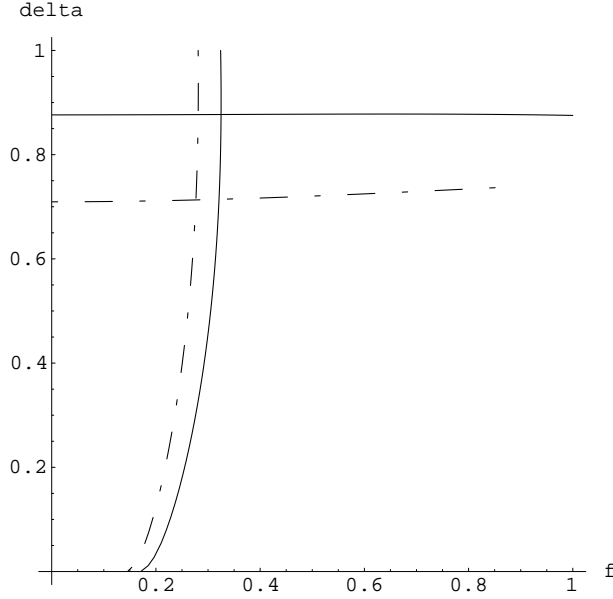


Figure 2: Politico-economic equilibria;  $c = 0.05, b = 0.05, \beta = 2, \alpha = 1, d = 0.5, h = 0.1, o = 0.3$  and  $\gamma = 0.5$ ; dashed line represents case in which  $\epsilon = 1$ ; solid line represents case in which  $\epsilon = 0$ .

source. The vertical axis is the ratio of the replacement rate and the OECD index for the strictness of EPL.<sup>7</sup> Thus, higher values indicate that in those countries there is more unemployment benefit provision relative to EPL. The variable on the horizontal axis is the ratio of the inactivity rate among individuals and the non-employment rate among households (see OECD (2001)) which approximates for the role households may play in providing insurance to inactive individuals. Why that? Suppose for the moment that all countries had the same inactivity rate. Then for those individuals out-of-the labor force, households may play a different role in providing transfers if the proposed ratio varies across countries. With a higher non-employment rate

<sup>7</sup>The net replacement rate indicator stems from the OECD, Benefits and Wages and is the average for four family types, over a five-year period and two earnings levels in 2002 (OECD (2004a), Table 3.3b)). The EPL indicator can be found in OECD (2004b), Table 2, A 2.4, Version 2.

of households, one would expect that within family transfers play a smaller role as families with at least one member being employed are less likely to be found. Thus, lower ratios of inactivity of individuals to non-employment rates of households should imply that in those countries the household plays a smaller role in providing insurance to inactive individuals.

The indicator for the trade-off draws on data from 2002 and 2003 for benefits and EPL, respectively, and the indicator that refers to which extent households provide a means of insurance is from the year 1996. This is done to account for possible endogeneity of the market outcome. With a time lag on the inactivity and non-employment rates among households it is more stringent to argue that market outcomes cause institutional choices.<sup>8</sup> The negative correlation – the correlation coefficient is -0.51 – shows that those countries in which the household is less of a means for transferring income also have higher unemployment benefits relative to EPL.

Former empirical work on labor market institutions has used other variables to explain unemployment insurance provision (but not the mix of insurance devices.) In a regression model (see table 1) I take into account other potential explanations of the trade-off between the two insurance devices. For example, Agell (2002) included variables measuring the size of the population and the openness of countries. Country size may matter if there are economies of scale such as fixed costs to the creation of institutions, which could arise when a workable administrative system of unemployment benefit compensations has to be established first (see Alesina and Wacziarg (1998)). Such a line of reasoning could apply in our case if costs for installing one over the other institution differ. The justification to include an openness variable in the regression may be that workers in countries that are more exposed to the world market may face a larger risk of becoming unemployed. Therefore, as was argued, citizens in those countries may opt

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<sup>8</sup>One may want to introduce a larger lag given the conjecture that institutional change might be sluggish – which, however, is not feasible for reasons of data availability.

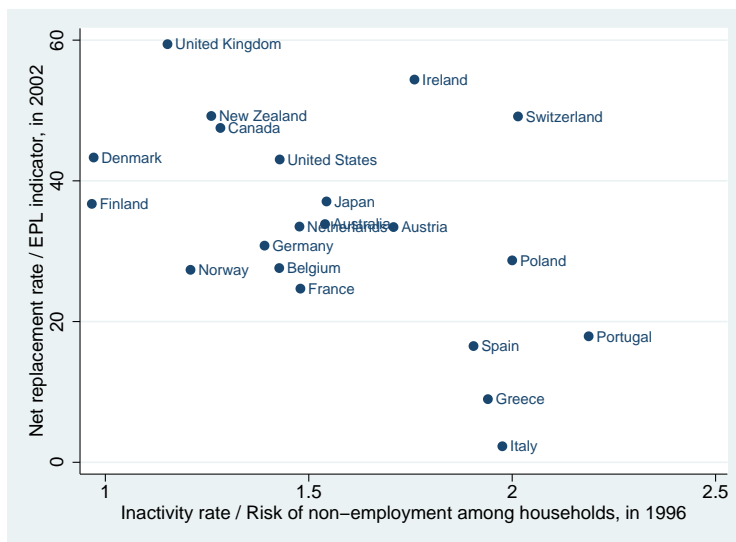


Figure 3: Modes of insurance in the labor market in 2002 over inactivity rate divided by risk of non-employment among households in 1996.

for larger governments as an insurance device (see Rodrik (1998)). In our case, voters might opt for a mix of insurance devices that is more adaptable to the needs of a changing world economy. Unemployment insurance over job protection could be preferred as the latter would slow down the reallocation of resources slowing down growth. As figure 3 shows a clustering of countries from southern Europe with lower GDP per capita, a control for income might also be of interest. Finally, I controlled for the skill composition with a variable measuring the share of workers with a lower secondary education in the population aged 15 to 64.

I ran regressions of the measure of the insurance mix on the ratio of the inactivity rate over the non-employment rate among households controlling sequentially for openness, GDP per capita, size of countries, and the skill composition.<sup>9</sup> Contrary to the ratio of the inactivity rate to the non-

<sup>9</sup>The control variables are also for the year 1996, except for the variable measuring the skill composition which refers to the year 1999 due to an insufficient number of

Table 1: OLS regressions on modes of insurance

Variable	Dependent variable: Ratio of replacement rate over EPL indicator in year 2002				
	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Constant	66.13*** (0.000)	59.27*** (0.001)	49.67* (0.069)	65.55*** (0.000)	68.09*** (0.000)
Inact. rate/Risk non-emp. households_1996	-20.95** (0.019)	-20.42** (0.022)	-17.26* (0.089)	-20.85** (0.023)	-18.08* (0.053)
Openness_1996		0.09 (0.319)			
GDP per capita_1996			0.00 (0.465)		
Population size_1996				0.00 (0.834)	
Skill composition_1999					-0.36 (0.409)
N	21	21	21	21	20
adj. $R^2$	0.22	0.22	0.20	0.18	0.18

Note: p-values are in (). \*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10%, respectively.

employment rate among households none of the controls was significant, see table 1. Altogether, those unsophisticated OLS regressions support the argument that the choice of insurance devices in the labor market is a function of whether the family serves as an alternative insurance device.<sup>10</sup>

## 5 Conclusions

In a cross country perspective modes of insurance in the labor market differ. There occurs to be a robust trade-off between EPL and unemployment insurance, such that countries show either a relatively high level of EPL and low benefit levels or vice versa. I argued that where countries locate on this trade-off can be explained by the variation in intra-household transfers to

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observations for the earlier year. The data on the skill composition can be found at: <http://www1.oecd.org/scripts/cde/members/lfsindicatorsAuthenticate.asp>, all other controls are taken from Penn World Data.

<sup>10</sup>In Neugart (2007) survey data is analyzed. The findings support the conflict of interest between different electoral groups which is in the approach presented here essential for the trade-off between unemployment insurance and employment protection.

those voters who are out-of-the labor force. The driving force is that voters who are not attached to the labor market but live in households with employed workers have a preference for more EPL relative to unemployment insurance which competing parties take into account when making policy proposals. Voters not attached to the labor market but living in a household have a vested interest in protecting the job of the employed household member out of which the intra-household transfers are paid given unemployment benefit levels. Given job protection, voters who are out-of-the labor force and covered by household transfers want relatively little unemployment benefits as a more generous unemployment benefit system would lower the transfers they receive from the employed household member. The explanation of the insurance mix in the labor market through variation in the household coverage of voters out-of-the labor force finds support in cross country data. For policy makers the findings suggest that electoral support for ‘flexicurity’ policies will only be achieved when family ties that express themselves in preferences over certain welfare state arrangements are adequately taken into account.

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